TELECOMMUNICATIONS AND RADIO ENGINEERING
CONTENTS FOR 1987

NUMBER 1

	Page English	Page Russian
PART 1		
TELECOMMUNICATIONS		
Volume 41		
TELEGRAPHY. DATA TRANSMISSION		
A.N. Dzyuba, E.N. Krichevskiy, V.I. Slyusarenko and R.I. Apal'ko: "Zond:" An Instrument-Program Complex for the Recording of Signals and Interaction Procedures in a Telegraph Network.....	1	15
Ar. S. Adzhemov, A. Zh. Markaryan and R.A. Khalidov: Analysis of Telegraph Message Statistics in a Network for General Use.....	4	17
V.V. Pantaleyev, Yu. V. Shevchenko and S.A. Zapyanov: Noise Immunity of the UPS-4800 in the Case of Phase Jitter and Random Phase Discontinuities in a TF Channel.....	7	19
COMMUNICATION LINES		
M.G. Oysgel't and V.S. Rombro: The Accuracy of a Search for Locations with Reduced Electric Strength of the Insulation of Communications Cables.	11	47
A.K. Slanov and N. Zh. Kitayeva: Protection of Circuits in Balanced Cable Communications Lines from Lightning Strokes by Means of Arresters....	16	50
I.I. Grodnev, P.R. Basanskaya and V.N. Korotkov: The Electromagnetic Field Near Coaxial Cables with Nonsolid Outer Conductors.....	22	54
E.L. Portnov: Coefficient of Mutual Inductance between High-Voltage Lines and Communications Lines for Ground with a Two-Layer Structure.....	25	56
SIGNAL GENERATION AND CONVERSION		
V.A. Sivov, Yu. G. Pisarev and V.I. Prytkov: Synthesis of an Optimal System of Clock Synchronization Using a Relay Pilot-Signal	28	58
V.A. Lobodzinskiy and N.N. Fomin: Optimization of the Energy Efficiency of an Oscillator with Plate-Grid Modulation.....	33	62
PART 2		
RADIO ENGINEERING		
Volume 42		
A.M. Taratorin: Recovery Algorithms for Signals with Constraints.....	37	3
BRIEF COMMUNICATIONS		
N.M. Vanina: Duration of the Bit Interval in a Relative Phase-Shift Keyed Marine Emergency Communications System.....	42	8
V.N. Nikolayenko, B.S. Kozorezov and V.P. Pustovit: Calculation of the Probability that Radio Equipment Parameters will Fall Below a Specified Level.....	46	12

	Page English	Page Russian
A.I. Kabanov: Phase Fluctuations in Phase-Lock-Loop Frequency Synthesizers	50	26
Yu. A. Bryukhanov: A Method of Increasing the Speed of Response of an Astatic Automatic Frequency-Control System	52	28
V.F. Odinokov: A Digital Discriminator of Multiple Frequencies	54	30
S.A. Plakhotnyuk and E.A. Khenkin: A Digital Method of Measuring the Power of Noise Processes by Means of a Nonlinear Analog-to-Digital Converter	58	34
V.V. Vasil'yev, K.P. Naumov and V.N. Ushakov: A Video-Frequency Acousto-Optical Correlator with Time Integration	60	36
N.A. Potapov: The Accuracy of the Determination of the Coordinates of a Single Resolved Element of the Radio Image of a Target in the Presence of Low-Level Noise	63	39
A.N. Ignatov, D.A. Krivozyatev and K.V. Martyukhin: A Digital Converter of Audio Signals	65	41
V.V. Malov, V.N. Simonov and A.V. Klyuchko: Pressure Gauges Based on a Quartz Oscillator Controlled by a Capacitive Sensing Element	67	44
O.M. Namicheyshvili: Threshold Standby of Logic Schemes	70	47
S.S. Romanov and A.M. Chernyy: Effect of Mutual Radio Interference on CW Radar	74	51
A.F. Mikheyev and V. Ya. Androsenko: Electronic Phase Modulators for Analog-Digital Converters	77	54
A.F. Tereshchenko: A Comparative Analysis of the Operation of Autodyne and Heterodyne Devices in Short-Range Radar Systems	80	57
I.I. Postnikov: Dependence of the Capacitance Ratio on the Electrode Radius in the Case of Anharmonic Oscillations of Quartz Resonators with Lens Piezoelectric Elements	82	58
L.N. Laut and S.M. Smol'skiy: Oscillators with Diode Amplitude Stabilization	84	16
M.I. Bogdanovich: Switch-Off of the Transistor Analog of a p-n-p-n with an Output Current Overload	87	19
M.A. Bykhovskiy: An FM Generator with a Stable Center Frequency and Its Use in Radio Engineering	90	22
Yu. A. Nemlikher, A.F. Rukavitsyn and I.A. Strukov: A Broadband Hybrid Integrated Bipolar Transistor Amplifier	94	26
A.G. Veselov and S.L. Ryabushkin: Wideband Tuning of Surface Acoustic Wave Filters	97	29
G.V. Aleshin: Optimization of a Scaling Phase Sensor for Signal Delay	98	30
V.V. Petrov and Yu. D. Sverkunov: Correction of Analog Multiplier Error	101	33
E.A. Dmitriyev, V.A. Yermilov and Yu. A. Yants: A Parametric Filter with Switchable Capacitors	104	37
D. Ya. Gal'perovich and S.A. Ganin: A Cryogenic Delay Line for Picosecond Pulses	106	39
V.M. Karpov and V.A. Malyshev: Investigation of a Balanced Ring Based on Components with Lumped Parameters	108	41
S.G. Pligin, V.B. Tekshev and V.A. Terekhova: Minimization of the Noise Factor of Microwave Amplifiers when the Oscillator Impedance Changes	110	42
R.I. Belitskiy, A.D. Kaluzhskiy and M. Ye. Movshovich: A Multimicroprocessor System to Select the Operating Frequencies of Radio-Communication Facilities	112	45
V.G. Yadernyy and V.S. Zaks: Statistical Processing of the Signals of Digital Frequency Synthesizers	115	47
A.P. Generalov: Investigation of the Suppression of Passive Interference in Moving Target Selector Systems for Various $S_{\Delta f}(F)$ Characteristics of the Heterodyne Oscillation	118	50
V.N. Bronnikov: Assessment of the Noise Immunity of a Differential Digital-Analog Method of Transmitting Analog Messages by Means of Compounded Signals	123	55
G.I. Tuzov, V.I. Postavnoy and S.I. Kosyakin: Composition Sets of Discrete Frequency Signals	125	58

	Page English	Page Russian
V.I. Finayev: A Model of a Data-Transmission Channel	127	60
L.S. Levchenko and Yu. V. Sopel'nik: The Detection Probability of Incoherent Radar Signals having a Non-Gaussian Amplitude-Fluctuation Distribution	130	63
A.L. Ryabtsov: Estimate of the Noise Immunity of an Optimum Receiver of Interfering RF-Pulse Signals	132	65
FOR THE ENGINEER		
V. Ya. Groshev: Analysis of the Frequency Response of Operational Amplifiers with a Common-Base Transistor Intermediate Stage	135	94
Yu. A. Lazunin and A.P. Kornev: An Amplifier with a Piecewise-Linear Approximation to a Given Amplitude Response	138	77
L.M. Braslavskiy, V.G. Kobylyanskiy and A.M. Sazhnev: Transformerless Line-Synchronized Rectifying Voltage Converters	140	78
V. Ya. Groshev: An Intermediate Cascode Stage for Wideband Operational Amplifiers	143	81
A.I. Dvorson: High-Speed Digital Measurement of Acoustic Frequency	146	84
V.P. Lyannoy, R.T. Berezanskiy and I.N. Alekseyenko: Amplification of High-Frequency Broadband Signals from Remote Sources	149	86

NUMBER 2

PART 2
RADIO ENGINEERING
Volume 42

B. Kh. Kharlov and N.D. Kombakov: Electromagnetic Compatibility in the Model of a Radio-Electronic System	1	3
I. Ye. Ushakov, L.V. Yevteyeva, S.A. Kachinskiy and A.F. Kulikov: Measurements of Sea-Swell Characteristics Using a Marine Radar System	6	8
I.M. Simontov, G.I. Nevmerzhitskiy and A.I. Tikhonov: A Rational Third-Order Nonlinearity Parameter	9	10
O.A. Khandzhyan: The Use of Logic Components to Build the Functional Units of a Receiving System	12	13
O.V. Gofayzen and A.V. Mindel': Mathematical Description of the Space-Time Structure of a Television Image	17	17
I.V. Gindler and V.G. Petnikov: Quadrature Correlation Signal Processing in a Real Receiver	20	20
L.G. Dorosinksiy and A.R. Kurov: The Effectiveness of Target Detection by Means of a Synthetic Aperture Radar	23	23
B.M. Bogdanovich and L.A. Cherkas: A Method of Increasing the Linearity of Frequency-Conversion Channels	24	24
V. Ye. Pustovarov, V.A. Luk'yanchuk and O.N. Chesnokov: A Broadband Twin Balanced Microwave Mixer in Integrated Form Based on a Two-Wire Transmission Lines	28	27
A.A. Titov: Calculation of an Interstage Correcting Unit for a Multi-octave Transistor Power Amplifier	30	29
V.L. Muravchenko: Analysis of a Distributed-Gain Amplifier with a Matched Load	33	32
V.I. Kaganov: Linearization of the Properties of a Nonlinear Device	36	34
Ye. V. Bausk and I.B. Yakovkin: Methods of Reducing the Level of a Twice-Reflected Surface Acoustic Wave in Frequency Selection Devices	39	37
S.A. Galun and Yu. V. Levchenko: Noise Immunity of a Time Delay Discriminator with Relay Characteristics	41	39
P. Yu. Vinogradov, V.F. Dmitrikov, M. Ya. Ostrovskiy and V.A. Sorotskiy: Transient Analysis in a Switching Oscillator	44	42
F.F. Kolpakov and I.A. Rak: A Dual-Loop Pulse Phase-Lock Loop Discrimination System	48	44

	Page English	Page Russian
A.V. Kuzichkin and B.I. Prosenkov: Interference Immunity of a Two-Link Communications System with Narrow-Band Interference Rejection at the Relay Station	51	47
A.I. Yermakov and V.V. Solov'yev: Effectiveness of Frequency Planning and Adaptive Frequency Control in a Changing Environment	52	48
A.P. Trifonov and V.B. Manelis: Quasioptimal Estimation of the Parameters of a Complex Target from Its Image	55	51
A.M. Movshovich: Digital Demodulation of an FM Signal	59	54
G.G. Moiseyeva: An Algorithm for Designing Large Systems of Phase-Shift Keyed Signals	62	57
V.V. Prilepskiy: A Method of Estimating the Phase of a Narrow-Band Process from its Zeroes	65	60
A. Ye. Kraskovskiy, Ye. I. Teterina and A.A. Semenov: Discrimination of Sampled Continuous Signals by Detection of the Disorder of a Random Process	67	62
I.A. Kuzina: A Method of Evaluating the Error Probability in m-ary Signal Resolution	69	68
V.V. Korsunov: Calculation of the Diffraction Field of an Echelle Grating with an Arbitrary Angle at the Vertex	70	69
Ye. R. Milyutin and G.M. Samel'son: Correlation of the Fluctuations of Frequency-Separated Waves in a Turbulent Absorbing Medium	74	72
A.S. Belanov, Ye. M. Dianov, V.I. Krivenkov and V.M. Solopov: Linearity of the Polarization of the dE_{11}-Mode in Circuit Fiber Lightguides	77	75
A.F. Chaplin and Ye. M. Yashchishin: The Effect of Finite Substrate Size on the Beam Pattern of Microstrip Antennas	79	63
Yu. V. Vaysleyb and N. Sharfi: Electrodynamic Parameters of Waveguide Devices with Cross-Slot Coupling	83	67
V.A. Vanke, S.K. Lesota and A.V. Rachnikov: Beam Pattern Control in Microwave Beam Energy Transmission	86	70
V.B. Braude and A.Z. Fradin: The Multiple Compensation Method in Short-Wave Antenna Arrays	90	73
I.A. Dokukov: Comparative Assessment of Various Integral Equations and Basis Functions for Numerical Calculations of the Current Distribution and Input Impedance of Thin Curved Wire Radiators	93	76
S.M. Apollonskiy: Design of Uniform Noncoaxial Screening Systems	94	77
A.S. Gurevich and G.S. Nakhmanson: Phase-Modulated Signal Reception in Interference Using an Acoustooptic Convolver	95	78
A.F. Bukhenskiy, S.V. Morozov and B.I. Yakovlev: Signal-to-Noise Ratio of an Optical Time-Integrating Spectrum Analyzer	99	82
V.P. Kostin: Assessment of the Relative Increase in Laser Power Needed to Compensate for Atmospheric Modulation Noise	102	84
V.A. Pospelov and V.S. Mostyko: A Program for Calculating the Response of a Low-Pass Filter	102	85
V.A. Kaplun and V.M. Zelenkevich: Introduction to Computer-Aided Design of Microwave Antenna Radomes	106	89
N.P. Ionov and B.V. Kazakov: A Power Analysis of the Control Modes of a Thin-Film Electroluminescent Panel	108	91
B.V. Petrov: Calculation of Switching Interference Taking Spurious Modulation into Account	111	93

NUMBER 3

PART 1
TELECOMMUNICATIONS
Volume 41

MULTICHANNEL WIRE COMMUNICATIONS

A.Ye. Botvinnik, S.A. Davydov, N.A. Kotel'nikov and B.I. Shlyuger: The Apparatus of a New Generation of Digital Transfer Systems for the IKM-30-4 Urban Telephone System	1	1

	Page English	Russian
D.A. Podberezin and S.I. Rabinovich: The Line Channel of the IKM-30-4 Primary Digital Transmission System	4	9
V.A. Sokolov: The Problem of Standardizing Grade of Service in Telephone Networks. A Review	13	12
ANTENNA-FEEDER DEVICES		
A.A. Timofeyeva, I.A. Kozlovskaya, T.A. Kazakova and Z.K. Khlopkova: A Broadband Nonaxisymmetrical Antenna with an Aperture Diameter of 1.5 m	19	43
Yu. N. Nosov: Formation of Slightly Directional Partial Radiation Patterns of a Multimode Antenna	23	46
ELEMENTS AND CIRCUITS		
V.A. Drachev, I.G. Perekhodnik and I.A. Litovkin: Main Result of the Development and Investigation of Hermetically Sealed Magnetically Controlled Memory Contact (MEMOREED) Multiple Connectors	29	50
L.I. Kogay: A Multidimensional Pulse Distributor	34	54
TELEVISION ACCELERATED DEVELOPMENT		
E.S.Glazman, A.A. Popov, L.I. Chistyakov and V.G. Shapiro: An Automated Television Station for the VHF Band with 50/5 kW Transmitters	38	4
A. Ya. Belik, G.V. Grits, G.I. Nikonov, A.A. Pavlov and N.A. Reushkin: Technical Means for Collective Television Reception and for Cable Television Systems	44	10
G.I. Nikonov: The Design of Distributor Networks for Cable Television Systems	52	16
L.B. Shteyn: Some Features of the Reception of Analog and Digital Data Using TV Receivers	61	22

Part 2
Radio Engineering
Volume 42

E.K. Pervyshin: Radio-Electronic Engineering at the Present Stage	68	7
A.M. Prokhorov: Achievements and Future Prospects of Lightguide Techniques	71	12
Yu.B. Zubarev: The Main Directions of Telecommunications Developments in the USSR	74	16
V.L. Koblov and M.S. Yarlykov: Principles of Integrated-Type Radio-Electronic Systems Design	76	20
B.M. Bogdanovich and V.G. Semenov: Signal-to-Noise Ratio Control Systems in an Adaptive Radio Receiver	82	28
A.T. Mingazin: The Bit Length of the Coefficients of Recursive Digital Filters with a Simplified Method of Synthesis	85	31
V.S. Samoylov, I.A. Vorob'yeva, and V.B. Gruzinenko: Elements of the Theory of Low-Frequency Piezoelectric Resonators	87	33
V.I. Merkulov: Sensitivity of Radioelectronic and Servo Systems, Which are Optimal in the Letov-Kalman Formulation	90	35
V.I. Kaganov and S.V. Yesin: A System for the Automatic Phase Stabilization of the Signals of a Group of Amplifiers	91	37
G.G. Dzhavadov and M.I. Sychev: Estimation of the Angular Coordinates of Radiation Sources by the Spectral Analysis Method	94	40
M.A. Ivanov, B.I. Makarenko, and I.A. Yakovlev: Alphabetic Balance Codes with Non-Block Structure	96	42
Ye.N. Voronin and Ye.Ye. Nechayev: The Orthoprojection Method of Antenna Measurements	97	43
S.S. Gigoyan and B.A. Murmuzhev: Band-Rejection Millimeter Band Filters with a Reflector Waveguide Made of Gallium Arsenide	101	46

	Page English	Russian
S.V. Zagryadskiy and V.V. Rogozin: Analysis of Ferrite Filters Taking the Magnetostatic Oscillations in the Gyromagnetic Resonators into Account	104	50
I.A. Dokukov: A Refinement of the Model of a δ-Generator Which Improves the Convergence of the Numerical Solution of the Integral Pocklington Equation in Terms of the Input Resistance	106	52
G.S. Nakhmanson: Estimation of the Location of a Source of Wideband Signal Radiation, Moving in the Fresnel Zone of a Multiposition Measuring System	108	54
Yu.V. Gulyayev, V.T. Potapov, A.A. Sokolovskiy, and N.L. Chkhartishvili: Sensitivity of Pickups Employing Fiber Lightguides of Conical Cross-Section	110	56
V.V. Grigor'yants, A.A. Dvornikov, Yu.B. Il'in, M.V. Kapranov, V.N. Konstantinov, A.V. Sokolov, and G.M. Utkin: Radio Electronic Devices Employing Fiber Lightguides	113	59
A.P. Trifonov and T.M. Ovchinnikova: Limiting Accuracy of an Optical Signal Parameter Estimate	119	67
V.I. Oznobikhin and V.B. Romodin: External Admittance of Slotted Emitters, Located on the Face of a Wedge	122	70
I.P. Norenkov, Yu.A. Yevstifeyev, and V.B. Manichev: A Method for an Accelerated Analysis of Multiperiod Electronic Circuits	123	71
S.P. Orlov: Microprocessor Imitation-Interference-Signal Generator	127	75
V.M. Bogachev and V.M. Demidov: An Algorithmic Device for Analyzing Transient and Steady States in Quasi-Harmonic Systems	129	77
A.L. Dzardanov, M.D. Kitaygorodskiy, G.N. Lobova, and N.M. Maslennikov: The Choice of a Low-Noise Transistor for a Low-Frequency Preamplifier	134	83

NUMBER 4

PART 1
TELECOMMUNICATIONS
Volume 41

USED MICROPROCESSORS IN COMMUNICATIONS

A.A. Kachan, A.A. Litavrin, L.B. Lubyanitskaya and M.A. Sosorev: An Electronic Telegraph Concentrator — a Data Switching Junction Based on a Microcomputer	1	30
I.R. Kazachuk: Apparatus-Program System for Recording Toll Telephone Calls — the "Register-P" System	5	33
T.K. Pogosyan: Problems of Setting up Techniques for Analyzing the Efficiency of Controlling Computer Systems at Switching Junctions	9	36
V.S. Pogorelov, Ya. I. Toroshanko and V.A. Kaustov: The Organization of the Page Memory of Microprocessor Systems	13	39
B.S. Gol'dshteyn: Selection of the Optimal Interrogation Period for the Controlling Microprocessor of a Switching Junction	17	42

COMMUNICATIONS SYSTEMS AND NETWORKS

S.V. Borodich: Generalized Technical Parmeters and the Homogeneity of Satellite Communications Systems	19	39

SIGNAL GENERATION AND CONVERSION THEORY OF SIGNAL TRANSMISSION

O.A. Balanov and A.I. Kabanov: The Principles of the Construction of Microwave Frequency Synthesizers	25	53
B.S. Troitskiy: A Frequency Discriminator with Correcting Circuits	30	57
V.A. Senderskiy: The Limiting Noise Immunity of a Binary Symmetrical Channel with Erasure	34	60

	Page English	Russian
PART 2 RADIO ENGINEERING Volume 42		
RADIOENGINEERING SYSTEMS		
A.K. Cheremisov: Comparison of the Potential Detection Characteristics in Radar Systems	38	3
A.A. Borodyanskiy: Multidimensional Spatial Digitization of Television Pictures	42	6
RADIO ELECTRONIC CIRCUITS AND DEVICES		
V.S. Okoneshnikov: The Response of a Filter with a Quadratic Phase-Frequency Characteristic to a Linear-Frequency Modulated RF Pulse	46	9
M.I. Bocharov and O.P. Novozhilov: Frequency Multiplication Employing Synthesized Nonlinear Reactive Elements	51	15
V.V. Bessonov: Optimization of the Parameters of Correlation Signal Detection Systems	55	18
Yu. A. Grebenko: An Analysis of Digital Filters Using a Bilinear Transformation	59	21
Ye. S. Poberezhskiy, M.V. Zarubinskiy and B.D. Zhenatov: Large-Dynamic-Range Integrating Sampling and Storage Device	63	24
N.N. Isakovich: Synthesis of Highly Linear Sections with Zero Sensitivity of the Transfer Characteristic	67	27
Ye. D. Lotkova: The Design of Microstrip Filters Employing Coupling Lines	70	30
Yu. V. Voronkov: A Device for Compensating the Second Harmonic in an AM Oscillation Envelope	72	32
A.A. Aleksanyan, V.A. Galakhov and V.G. Moiseyev: Switch-Off Lag of Transistors in Push-Pull Switched Oscillators with Current Switching	76	35
V.S. Samoylov, I.I. Postnikov and M.V. Mironova: Theoretical Principles of the Oscillations of Piezoelectric Resonators, Operating in Countour Shear Modes	78	37
Ye. V. Zadedyurin: Analysis of Receiver-Amplifiers by Means of Modified Volterra Series	80	39
SIGNAL TRANSMISSION, RECEPTION AND PROCESSING		
S.A. Suslonov: The Phase-Structure Signal Multiplexing and Separation Method	82	40
Ye. A. Bogatyrev and A.N. Sharova: Use of the Structure Method to Improve the Performance Characteristics of Frequency Multipliers and Converters	87	45
V.G. Ivanova: A Digital Frequency Detection Algorithm	92	49
V.I. Dolgov and G.Z. Khalimov: Decoding of Block Codes with Erasure of the Least Reliable Symbols	96	53
G.S. Markaryan, G.G. Khachatryan and L.G. Khachatryan: A Method of Block Synchronization of Alphabetic Codes for Digital Transmission Systems (DTS)	100	56
V.L. Odivanov and Yu. A. Gusev: A Method of Processing Data Recorded on a Logarithmic Time Scale	104	60
Z.B. Gaydukov: Correlation Function and Spectral Density of a Truncated Periodically Nonstationary Random Process	106	62
V.M. Gitlits, V.G. Orlov, V.G. Solov'yev and A.V. Shauro: The Effect of the Digital Conversion Rate of Adaptive Delta-Modulation on the Information Parameters of Coded Voice Signals	108	63

	Page English	Russian
ANTENNA-WAVEGUIDE TECHNIQUES AND RADIO WAVE PROPAGATION		
A.F. Vorob'yev, D.I. Mirovitskiy, V.I. Ponomarenko and Yu. V. Pugachev: The Effective Permeability of Magnetodielectric Media with Non-spherical Particles	110	65
B.M. Mashkovtsev and Yu.G. Neykov: Comparative Evaluation of Methods of Calculating the Parameters of Dielectric Waveguide Junctions	114	68
V.M. Katushkina, V.P. Malyshev and A.V. Shalapanov: Calculation of the Characteristics of a Microwave Oscillator with Auxiliary Feedback	116	70
A.R. Tagilayev: Loop Microstrip-Slot Junctions	119	73
M. Yu. Chervenko: The Dependence of the Reflection Properties of Multi-layer Gratings on the Displacement of the Layers	121	74
RADIO OPTICAL METHODS AND DEVICES		
B.G. Gorshkov and A. Yu. Kuzin: Application of Functional Iterations to the Analysis of Oscillatory Processes in a Fiber-Optic Self-Excited Oscillator	123	76
V.A. Golub: The Signal-to-Interference Ratio at the Output of an Acoustooptical Device for Producing Interferograms	127	79
R.M. Shimov and V.A. Golubikhin: A High-Sensitivity Photoamplifier	130	82
COMPUTERS AND MICROPROCESSORS IN RADIO-ENGINEERING SYSTEMS		
E.M. Manukyan and M.I. Abolits: Grouping of Input Variables in Programmable Logic Matrices	133	84
U. Yu. Usmonov and F.M. Yablonskiy: A Microprocessor for Measuring the Parameters and Characteristics of Matrix Screens	136	86
N.I. Biritskiy, A.A. Valanteyus, A.K. Dargis, T.K. Ryakyavichyus and L.L. Stankyavichyus: Investigation of Electronic Circuits by the Methods of Optimal-Control Theory	139	89
FOR THE ENGINEER		
V.K. Kol'tsov: Automatic Control of the Supply Voltage in Power Amplifiers of Single-Sideband Transmitters	141	91
A.M. Zharov, A.A. Kreymer, A.G. Malolychenko and I.B. Yakovkin: Intermediate-Frequency SAW Filters Made from Different Materials for an Ultrashort wave FM channel	144	93

NUMBER 5

MICROPROCESSOR IN COMMUNICATION TECHNOLOGY		
V.G. Dedoborshch, Yu. N. Starostin and S.A. Vorob'yev: The Principles of the Construction of Models of Promising Digital Switching Systems	1	11
Al. S. Adzhemov and Yu. I. Filyushin: Effect of Switching Different-Rate Channels on Digital Switching System Characteristics	6	14
E.B. Yershova: Structural Organization of the Microprocessor Control of a Digital Switching Junction	11	18
N.V. Zakharchenko and I.A. Kireyev: Program Realization of Data Transmission Systems Based on Microcomputers	19	25
V.A. Bakharev and A.F. Fomin: Digital Synchronous-Phase Signal Demodulator with Angle Modulation Using the K589 Microprocessor	22	27
TRUNK AND LOCAL RADIO COMMUNICATIONS		
V.I. Shchepotin and V.V. Krest'yaninov: Global Maritime Communications Systems for Distress and to Ensure Navigational Safety	28	32

	Page English	Russian
L. Ye. Varakin: A Communications System with Leased Spread-Sectrum Signals	33	36
ANTENNA-FEEDER DEVICES		
O.P. Frolov: An Evaluation of the Effect of the Antenna Radiation Pattern on Signal Stability in an RRL Hop	38	40
A.L. Buzov and L.S. Kazanskiy: An Analysis of the Losses in an LC-Network	42	42
COMMUNICATIONS LINES		
S.M. Vernik, G.N. Krasavtsev and B.K. Nikitin: An Adaptive Method for Compensating Radio Interference in Cable Trunk Lines and the Special Features of Its Application	45	45
V.M. Bondar': Investigation of the Effectiveness of Multiwire Screens in an External Electromagnetic Field	50	50
K.K. Nikol'skiy, M.A. Protasov and O.V. Chamkina: Corrosion of the Lead Sheaths Around Communications Cables in Polyethylene Pipe Channeling	54	51
G.A. Cherenkov: An Optical-Fiber Filter with Absorbing Layers	57	54
S.I. Pozdnyak and Yu.K. Mits: Coherence Matrix and Stoke's Parameters of Partially Polarized Waves in Three-Dimensional Space	139	80
S.M. Apollonskiy: Composite Screening Covers	142	82
RADIO OPTICAL METHODS AND DEVICES		
Ye.S. Avdoshin: A Fiber Acoustic Transducer	143	83
COMPUTERS AND MICROPROCESSORS IN RADIOENGINEERING SYSTEMS		
V.B. Bespalov: The Use of a Microcalculator When Designing a Microwave Transistor Amplifier	146	86
A.N. Bystrov and B.V. Nezlin: A Detector of Sampled Signal Packets Based on the K589 Microprocessor	149	90
A.M. Karminskiy: Paralleling of Methods and Algorithms for Systems Optimization	152	92
FOR THE ENGINEER		
V.Ya. Groshev: Active Current Sources	154	94

NUMBER 6

PART 1
TELECOMMUNICATIONS
Volume 41

ACCELERATED DEVELOPMENT FOR THE TELEPHONE NETWORKS		
A.A. Aleshin: A Scientific-Technical Program for Extending the Telephone Network of the USSR	1	1
N.A. Sokolov: An Evaluation of Signal-Message Delay Length when Realizing Additional Functions of the GCS System	6	9
S.A. Galantsev and A. Ye. Kucheryavyy: Statistical Methods of Monitoring Lines with Crosstalk	11	13
MULTICHANNEL COMMUNICATIONS		
L.G. Gassanov, A.P. Protopopov, V.I. Cherepukhin and A.A. Lipatov: Miniature Receiving and Transmitting Modules for Radio Relay Links in the 4 GHz Band	14	19

	Page English	Page Russian
V.V. Bortnikov and A.V. Romanov: The Autocorrelation Reception of Composite Signals in Digital Tropospheric Communications Links.....	16	21
DATA TRANSMISSION. COMMUNICATIONS NETWORKS		
Yu. A. Tamm and P.G. Fritsler: An Interference-Suppressing Adapter for Combatting Pulsed Interferences with Short-Term Interruptions.....	22	38
L.K. Kiselev and V.A. Netes: An Investigation of Channel Failure Coincidences in a Data Transmission Channel with a Duration of Less than the Failure Criterion.....	27	41
ANTENNA-FEEDER DEVICES		
V.I. Komissarov: Application of Concentric Multiwire Feeders for SW Transmitting Antennas.....	31	45
Ts. I. Tsanev and S.V. Voynov: Factors Affecting the Dielectric Strength of the Atmosphere. Experimental Investigations.....	38	50
A Specialist's Commentary.....	41	53
M.N. Berger and Ye. R. Trubekhin: Two-Mode Waveguide Filters with Elliptical AFC.....	42	54
SIGNAL GENERATION		
V.V. Vasyukov, D.A. Tkachenko and M.A. Utkin: Effect of Transistor Inertia on the Spectrum of a Quasi-Harmonic Signal.....	46	57
POWER SUPPLIES		
A.N. Yakushkin, V.I. Khandogin, A.I. Ivanov-Tsyganov, V.V. Prostotin and B.I. Soldatov: Construction of High-Power Low-Voltage Secondary Electrical Power Supplies with Transformerless Input.....	49	59
L.L. Khruslov, V.F. Sitnikov and S.L. Kostyukhin: Magnetic Switches in Multichannel Secondary Power Supplies.....	53	62
PART 2 RADIO ENGINEERING Volume 41		
G.Z. Yushkyavichyus: Television and Radio-Broadcasting Development Prospects.....	57	3
V.N. Damgov: Application and Distinctive Features of the Converting Properties of Autodyne Short-Range Radar Systems.....	59	6
A.S. Skryabin: The Correlation Between Parallel- and Orthogonally Polarized Radar-Echo Components.....	65	14
K.A. Semenov, V.V. Krest'yaninov and A.I. Antonov: Adaptive Choice of the Block Length in Data-Transmission Systems.....	69	19
Ye. A. Smirnov: An Algorithm for Processing Digital Signals Received in the Presence of Impulse Interference.....	71	21
A.N. Ser'yeznov and L.N. Stepanova: Compensating for Thermal Drift of the Parameters of the *S*-Type Current-Voltage Characteristic of an Asymmetrical Equivalent of a *p-n-p-n* Structure.....	74	24
A.V. Trifonov: An Active Low-Pass Filter.....	77	27
P.V. Belov, V.E. Kel'mishkeyt and V.I. Orlov: Experimental Investigation of an Adaptive Compensator of Narrow-Band Interference.....	78	28
O.V. Koltygin and S.M. Smol'skiy: Transfer Factor of a Transistor Autodyne with Delaying Feedback.....	80	30
S.L. Portnoy and A.N. Kozlenko: Band-Efficient Coding for a Gaussian Channel.....	83	33
V.E. Gurevich and S. Ye. Korshunov: Statistical Characteristics of a Narrow-Band Cyclo-Stationary Process.....	87	39

	Page English	Russian
N.K. Ignat'yev and O.F. Grebennikov: Reducing the Number of Arguments of a Spectrum-Limited Multidimensional Signal	91	43
V.S. Gutin: Correlation of Spectral Samples of a Discrete Fourier Transform	93	45
L.T. Sushkova, V.V. Bryksin and Ye. Ya. Marchenko: The Generation of a Random Process with Specified Correlation Properties	95	47
K.K. Venskauskas and V.A. Rubel': Basic Models of Non-Gaussian Interference	96	48
A.M. Pokras: Antennas for Satellite-Communications Ground Stations	98	50
A.G. Shlionskiy: Algorithm for Determining the Electron Density from Ionograms	102	55
S.M. Avdeyev, N.A. Bey and B. Ye. Tokarev: A Lens with Controlled Refractive Index for Millimeter-Wavelength Antennas	105	58
A.A. Ishchuk and Ye. R. Trubekhin: The Coupling Coefficient of Waveguide-Dielectric Resonators	106	60
B.A. Panchenko and V.D. Oshivalov: Polarization Loss of Turnstile Radiators	108	62
M.A. Nikolayev: Electrodynamic Modeling of a Break in a Microstrip Line	110	63
V.N. Antipov: The Resolving Power of Semiactive Synthetic-Aperture Radar Systems	112	66
A.L. Drabkin: Underground Wireless Transmission of Information	115	68
V.M. Temnov and M.V. Vardanashvili: Application of the Method of Separation of Variables to the Problem of Diffraction by a Cylinder of Complicated Shape	117	71
A.A. Press: Determination of the Parameters of a Longitudinal Array, Located Near an Infinite Ellptical Cylinder, by the Method of Moments	120	74
A.P. Stepin: Rank Detectors of Coherent Optical Signals in Thermal Noise	122	75
A.N. Dorofeyev: Optimum Gain of an Avalanche Photodiode	124	78
L.V. Popov, G. Ya. Rubinshteyn and Yu. S. Rusin: The Use of Microprocessor Systems for Matching Radio-Transmitting Channels	126	79
A.N. Ignatov, K.V. Martyukhin, D.A. Krivozyatev and Yu. S. Toptygin: Wide-Band Microelectronic Analog Keys for Electronic Commutation Systems	128	81
L.B. Krol: Computer Spectral Analysis of the Response of a Nonlinear Element to a Periodic Stimulus	132	85
FOR THE ENGINEER		
V. Ye. Pustovarov and V.K. Smirnov: Realization of a Rational Transfer Function by an Active RC Filter with one Control Element	133	86
O.V. Gofayzen and N.I. Yepifanov: A Method of Increasing the Accuracy when Evaluating the Linear Distortions of a Cosine-Squared Pulse	135	88
S.S. Vdovin: The Minimum Volume of a High-Power Pulse Transformer	136	89
A.F. Pan'kov, I.V. Usmanov, L.N. Stepanova and V.P. Starikov: The Analog Channel of an Acousto-Emission Device	139	92

NUMBER 7

PART 1
TELECOMMUNICTIONS
Volume 41

SATELLITE COMMUNICATIONS, DIGITAL BROADCASTING

M.V. Gitlits, A. Yu. Zelenin, O.B. Popov, A.V. Nikonov: Frequency Organization for a Digital Radio Broadcasting Network	1	13
A. Kavetski, V.L. Bykov, V.V. Svyatogor, Sh. Berto, V. Skonechny, and V.V. Levin: A System for Meteorological Measurements in the Dubna-Intercosmos International Test Region	5	16

	Page English	Russian
COMMUNICTIONS NETWORKS. AUTOMATIC SWITCHING		
G.P. Basharin, S.I. Belov, V.G. Dedoborshch, V.A. Yefimushkin, B. Ye. Kurenkov and A.F. Petrov: A Computer-Aided Design System for General Signalization Channel Networks	11	21
K. Blunar: An Analysis of a Telephone Network with Alternate Routes	16	25
INTEROFFICE COMMUNICATIONS		
R. Khertsig and V. Vyustenberg: Digital Program Controllable Institutional and Industrial Small-Size Automatic Telephone Exchanges	20	32
A.S. Vorontsov and Ye. A. Kirilenko: The Effect of Conductor Surface Layer Condition on the Characteristics of Coaxial Cables	22	39
L.S. Putchenkov: Empirical Evaluation of the Filling Factors of Transverse Sections of Cable Channels	27	43
ELEMENTS AND NETWORKS		
P.N. Ganskiy: The Design of Inertialess Frequency Multipliers of Harmonic Oscillations	31	49
A.S. Bal'sevich, V.I. Gvozdev and Ye. K. Konin: A Volume Integral Scheme for a Pattern-Forming Microwave-Frequency Matrix	34	51
R.R. Badalyan: A Calculation of the Allowable Noise in a Transmultiplexor	38	55
Yu. K. Smirnov: Error Detectors and Pseudorandom Test Signal Generators	42	58
PART 2 RADIO ENGINEERING Volume 42		
RADIO SYSTEMS		
N.O. Varganov, V.V. Voskoboynikov and A.F. Mevis: Extended Systems of Varying Structure with Mobile Radio-Communication Objects	47	3
A.F. Kotov and V.B. Grebennikov: Pulsed Multiposition Radio-Engineering Systems	50	6
A.G. Trusov and G.G. Bryzgalova: Assessing the Reliability in Sequential Analysis when Testing Complex Hypotheses	52	9
V.I. Kirmasov: Solution of the Ill-Posed Problem of Estimating the Scattering Characteristics of Radar Targets in the Time Domain	54	11
G. Ya. Buymistryuk: An Information-Semantic Model of the Adaptation of a Spectro-Zonal Television System	56	13
ELECTRONICS CIRCUITS AND DEVICES		
I.V. Povalyayeva: Assessing the Time-to-Synchronism of an Inverse-Conversion Loop	57	13
T.K. Paushkina and K.A. Samoylo: The Spectrum of the Signals of Self-Excited Oscillators having a Nonlinear Resonance System	60	16
A.A. Paramonov and G.V. Kulikov: Noise Immunity of an Auto-Correlation Demodulator of MFSK Signals in a Two-Path Communications Channel	63	19
A.N. Korolev: The Rapid Stable Solution of the Dispersion Equation of Linear Filtering	65	21
S.V. Yesin: The Design of an Automatic Phasing System for a Multichannel Microwave Signal Amplification System	67	23
V.Ye. Pustovarov, V.O. Sokolov, V.P. Litvinov and V.N. Denisov: A Method of Determining the Parameters of LF Electromechanical Filter Prototypes with Adjustable Transducers	70	26
A.S. Bogachev: Quasioptimum Discrete Space-Time Signal Processing Algorithms	72	28

	Page English	Russian
V.A. Suchilin: Complementary Digital Filters with a Finite Pulse Response	76	33
A.T. Mingazin: Analysis of the Influence of Coefficient Quantization on Digital Filter Characteristics	78	35
S.D. Vorob'yev and L.S. Tsil'ker: A Method of Realizing the Discrete Fourier Transformation in Radio Systems	80	37
Yu. I. Kotov: The Symmetry of the Phase Spectrum of Signals	83	40
P.V. Belov and V.I. Orlov: Adapative Interference Compensation in a Channel with Concentrated Interference	86	43
V.S. Girshov: Substantiation of a Digital Data Transmission Technique in Channels with Frequency-Time Scattering	89	46
V.V. Shaykhutdinov: Algorithms for Signal Conversion into Bases of Discrete Harmonic Functions	90	47
A.P. Trifonov and V.I. Parfenov: Frequency-Time Modulation of Spread-Spectrum Radio Signals	91	48
ANTENNA-WAVEGUIDE TECHNIQUES AND RADIO-WAVE PROPAGATION		
S.M. Zhminchenko, D.I. Mirovitskiy, V.L. Nazarov and N.N. Sebekina: The Influence of the Refractive-Index Distribution in Lightguides and the Excitation Conditions on the Mode Composition and Pulse Response	93	50
V.V. Nikol'skiy and A. Yu. Kozlov: Electrodynamic Analysis of Microstrip Structures with Absorbing Films	97	55
B.A. Snedkov and A.B. Snedkov: The Radiative Properties of Injected Electron Beams	101	60
N.D. Kurtev and V.I. Khakhin: The Application of the Convolution Method to Calculate the Response of a Scanning System	104	62
V.V. Chebyshev: Numerical Analysis of a Phased Antenna Array with Printed Helical Elements	106	65
V.F. Dubrovin: Analysis of the Effect of the Waveguide Parameters on the Characteristics of Holographic Devices	109	67
I.F. Budagyan: Spectral Analysis of Plane Transversely-Inhomogeneous Waveguide	111	70
V.A. Yakovenko and Yu. V. Goloshchapov: An Algorithm for Designing Microstrip Microwave Matching Networks	115	73
Yu. A. Korchagin: Measurement of the Parameters of VLF Ground-Based Antennas	118	76
I.A. Vinter: An Estimate for the Sensitivity of a Method of Microwave Field Analysis	119	77
RADIO-OPTICAL METHODS AND DEVICES		
A.P. Reutov and V.V. Chapurskiy: The Resolving Power of Inverted Radio Holograms for Recording a "Foreward-Scattered" Field	121	78
COMPUTERS AND MICROPROCESSORS IN RADIO ENGINEERING SYSTEMS		
A.S. Vinitskiy: Frequency Modulation and Digital Data Processing	126	83
FOR THE ENGINEER		
A.I. Ivanov-Tsyganov, Yu. A. Spiridonov and V.I. Khandogin: A Self-Excited Converter Employing a Transformer with Crossed Magnetic Fields	131	91

Page
English Russian

NUMBER 8

PART 1
TELECOMMUNICATIONS
Volume 41

TELEGRAPHY AND DATA TRANSMISSION

K.F. Astapkovich, V.V. Derzhavina, I.O. Zakharov, B.P. Kalmykov, E.A. Kolganov, S.I. Lopatin, E.P. Perfil'ev and A.G. Chistyakov: The UPS-144 PSh Digital Modem For Primary Broadband Channels..... 1 30
V.A. Netes and V.O. Shvartsman: The Capacity of a Channel Switching System Subscriber Buffer..... 6 35
A.E. Dolbakyan: Determination of the Probability of the Loss of Message Blocks Stored in Telegraph Message Transmission Multiplexers..... 9 37
Ar. S. Adzhemov: Isochronous Signal Transmission by Superposition over a Synchronous Digital Circuit..... 13 40
A.U. Zhil'tsov: The Use of Circular Polarization in SW Communications and Broadcasting in the Case of Zenith Radiation..... 18 45

ANTENNA-FEEDER DEVICES

K.P. Kharchenko, S.S. Aksenov, V.M. Timofeyev and V.P. Demidov: A Method of Increasing the Operating Reliability of Antennas and the Antenna Fields of SW Receiving Radio Centers..... 21 47
V.D. Kuznetsov, Ye. A. Anfilov and Yu. N. Nosov: Two-Element Antennas..... 26 51
V.M. Antonenko, I.Z. Berlyavskiy, A.P. Tizik and L.S. Tizik: The Tolerances on the Dimensions of Components and the Accuracy of the Assembly of Coupled-Line Strip Bridges..... 29 53

SIGNAL GENERATION AND CONVERSION

V.A. Levin and V.R. Nikogosyan: An Investigation of the Subharmonic Synchronization of an SAW Oscillator..... 34 57
A. Yu. Simonov, Yu. L. Simonov and V.V. Zhmurov: Analysis of a Square-Law Diode Amplitude Detector..... 39 60

PART 2
RADIO ENGINEERING
Volume 42

V.I. Merkulov: The Immunity of Radio-Electronic Tracking Systems, Optimum by the Kalman-Letov Criterion, to Additive Interference.... 43 3
V.A. Senderskiy and V.V. Strokov: The Maximum Noise Immunity of a Digital Communications Channel with Binary Coding..... 45 5
V.G. Teryayev: The Output Signal-to-Noise Ratio of the Synchronizing Circuits for Quasi-Coherent Demodulators of PSK Signals..... 49 8
A.V. Kiselev and I.S. Tyryshkin: A Method of Increasing the Speed of Response of Nonrecursive Filters 54 13
D.V. Nezlin and A.N. Bystrov: Characteristics of a Time Discriminator with Stroboscopic Sampling of the RF Signal..... 56 16
V.A. Il'in, A.A. Naumov and V.S. Etkin: Fluctuation Sensitivity of a Radiometer with Controlled Current-Voltage Characteristic 58 18
V.I. Molotkov and M.L. Zaytsev: The Current-Voltage Characteristics of a Negavaristor..... 61 21
V.A. Malyshev: The Admittance of a Nonlinear Element Fed by a Voltage or Current Source..... 64 24
V.V. Markin and V.V. Meshcheryakov: Sensitivity of Sectional Multi-stage Active Low-Pass RC Filters..... 66 26

	Page English	Russian
Ye. N. Anisimov and B.A. Astashkevich: Calculation of Nonlinear Distortion in Frequency Converters	67	27
Y.A. Fomin and A.V. Savich: Recognition-System Optimization for Gaussian Ensembles with Different Covariance Matrices	69	29
K.I. Kucherenko and Ye. F. Ochin: Sorting Networks for Two-Dimensional Median Filtering of Halftone Images	75	36
D. Ye. Matveyev: Frequency Division of an FM Signal Plus a Frequency-Hopping Jammer	78	39
A.P. Lisitskiy and V.V. Nikiforov: Digital Feedback Parameters Optimization	90	41
V.I. Tsivlin: The Relationship Between the Amplitude and Phase Fluctuations of a Random Process	82	43
A.I. Tyazhev: Digital Generation and Detection of Signals with Angle Modulation and Keying	84	45
V. Ya. Kontorovich: Characteristics of Markov Birth and Death Processes	88	49
M.I. Zhodzishskiy, Yu. I. Zhodzishskiy and S.V. Lyusin: Guaranteed Noise Immunity in Symbol-by-Symbol Data Transmission	89	49
L.N. Oganyan and V.L. Pankov: Evaluation of Message Transmission Reliability When There Are Brief Dropouts of Communications Channels	90	51
A. Ye. Bozhko, A.L. Shteynvol'f, and V. Ye. Korsun: The Distribution Density of the Sum of a Stationary Random Process and a Polyharmonic Process	92	52
R.A. Pashkevich: Choice of Signal Parameters in an *M*-ary Frequency-Shift Telegraphy System	93	54
Yu. A. Chernov, A.U. Zhil'tsov and A.V. Khevrolin: Decameter Radio Wave Field in the First Hop Skip Zone	95	55
D. Khalife: The Use of Three Orthogonal Antennas to Receive Elliptically Polarized Waves	100	60
S.P. Skobelev: Radiation from a Two-Mode Waveguide Array Forming Overlapping Subarrays	103	62
V. Yu. Korovkin, M.D. Levin, A.V. Maryakhin, B.P. Nam, D.V. Nomokonov, M.M. Rubanovich and A.S. Khe: A Method of Obtaining a Significant Delay of a Magnetostatic Wave in Thin Ferromagnetic Films	106	65
V.T. Fedin: The Equivalent Antenna Efficiency of a Radiometer	108	68
S.M. Nikulin and A.N. Salov: The Application of Twelve-Pole Reflectometers in Microwave Measurement Techniques	111	70
A.S. Azarov, Yu. S. Babkin, N.F. Buranbayev, A.V. Koldayev, A.F. Mironov, V.V. Stroganov and Ye. V. Sukhonin: Attenuation of Millimeter Waves by Rain	114	73
E.L. Kazakov, P.N. Litvinenko, Yu. M. Shishkin and A.I. Kravchenko: The Influence of Inhomogeneities on the Polarization and Scattering Properties of Objects of Simple Geometrical Shape	116	76
Yu. M. Bezborodov, V. Yu. Loskutov and A.V. Savel'yev: Dielectric Cavities in Phase Controllers	119	79
Yu. A. Korchagin: Capacitive-Loaded VLF Antennas Mounted on Elevated Terrain	122	82
A.N. Gur'yanov, D.D. Gusovskiy, G.G. Devyatykh, Ye. M. Dianov, A. Ya. Karasik, V.A. Kozlov, A.M. Prokhorov and A.K. Senatorov: A Rotation Sensor Based on Monomode Optical Fibers	123	83
V.M. Bogachev and V.M. Demidov: An Algorithmic Device for Analyzing the Stability of Quasi-Harmonic Systems	128	88
A.S. Klimenkov: A Model of a Stripline Resistive Load	131	92

FOR THE ENGINEER

I.P. Pakhomov: Structural Optimization of Secondary Power Supplies	134	94

Page
English Russian

NUMBER 9

PART 1
TELECOMMUNICATIONS
Volume 41

FIBER OPTICS COMMUNICATION LINES

G.P. Dovlatbegov and Ye. V. Matsnev: A Laser Transmitter with a Composite Resonator for an Optical-Fiber Transmission System..... 1 33
G.A. Cherenkov, T.A. Martynova and A.N. Mart'yanov: Synthesis of a Highly Efficient Mode Filter..... 5 36
I.I. Teumin: Effect of Solitons on Data Transmission in an Optical-Fiber Transmission System (A Discussion Paper)..... 9 39
V. Glazer and G. Hanzel: The Use of Optical-Fiber Communications Lines in the Subscriber Loop of a Network..... 15 43

TELEVISION

V.A. Galochkin: Repair and Preventive Maintenance of Low-Power Transmitters in the Zonal TV Broadcasting Network..... 22 49
R.L. Mareyn: Effect of Algorithmic Relations Between the Quality of a Video Channel on Their Intercorrelation..... 27 53

TRUNK AND LOCAL RADIO COMMUNICATIONS

Ye. V. Zhukov, A. Ye. Krasovskiy and A.A. Semenov: An Investigation of the Time Distortions of Discrete Signals in the Decameter Band... 31 56
L. Ye. Varakin: Noise Immunity of a Communication System with Leased Spread-Spectrum Signals..... 35 59

PART 2
RADIO ENGINEERING
VOLUME 42

RADIO ENGINEERING SYSTEMS

Ye. V. Lebedinskiy and A.P. Sedel'nikov: The Effectiveness of a Radio Link Subject to Communication-Channel Failures..... 39 3
A.M. German and O.V. Safonov: The Accuracy with Which Moving Target Coordinates can be Measured in a Multiposition System Allowing for the Aperture-Synthesis Effects..... 44 7

ELECTRONIC CIRCUITS AND DEVICES

A.A. Titov: Compensation of the Detector Effect in an Amplifier with Automatic Current Control..... 47 10
V. Yu. Loskutov and A.A. Lipatov: Demodulation of PSK Signals Using an Ultralow Intermediate Frequency..... 50 13
Ye. F. Glazin, D.I. Kryukov and V.N. Sokolenko: Power Losses in a Non-search Signal Detector..... 53 15
V.V. Maslennikov: Generalized Performance Characteristics of Broadband Amplifiers..... 56 18
S.V. Zagryadskiy, V.V. Rogozin and S.V. Bogachev: Equivalent Nonlinear Admittance of a Gyromagnetic Resonator at High Power Levels..... 59 20
Ye. V. Bausk and I.B. Yakovkin: Highly Selective Saw Filters Based on Broadband Transducers with Selective Removal of the Fingers..... 61 22
V.V. Denisenko: Generalization of Controlled Current Source Designs Based on Operational Amplifiers..... 65 26
T.V. Kovylkina: A Comparison of the Characteristics of a Spatial Wiener-Hopf Filter and a Compensation Device..... 69 29
M.I. Bogdanovich: Stabilization of the Temporal Parameters of Negatron Relaxion Devices..... 70 29

	Page English	Russian
SIGNAL TRANSMISSION, RECEPTION AND PROCESSING		
V.I. Merkulov, V.A. Yefimov and V.N. Lepin: Analysis of the Additive Noise Immunity of an Optimum Tracking Radio Rangefinder	71	30
E.I. Glushankov and V.V. Davydenko: Adaptive Spatial Filtering in the RF Circuit of a Radio Receiving Center	75	34
V.N. Chibisov: Structural Optimization of Multiposition Signals	78	37
B.G. Shadrin: Improvement of the Reliability of the Reception of Differential Phase-Shift Keyed Signals	82	40
A.L. Yerofeyev, V.P. Yakubov and A.S. Kaftonov: Spectral Signal Distortion in Phase-Locked Loop Systems	85	43
B.V. Rakitin and N.G. Dukhina: The Difference in the Parameters of Direct and Ground-Reflected Signals	87	45
I.I. Markovich and V.M. Chernitser: A Time-Scale Method of Quasioptimum FM Signal Processing	89	46
K.K. Venskauskas: Optimization of Signal Detection Against a Background of Non-Gaussian Noise	91	48
ANTENNA-WAVEGUIDE TECHNIQUE AND THE PROPAGATION OF RADIO WAVES		
N.V. Bakhmet'yeva and P.B. Shavin: The Statistical Characteristics of Shortwave Signals in Inclined Sounding	93	49
B. Yu. Kapilevich and V.V. Dedov: A Compact Microwave Filter Based on a Three-Mode Cutoff Waveguide-Dielectric Cavity	97	53
A.V. Kryukov, M.S. Lavrov and S.I. Podkovyrin: The Optimum Texture of Hexaferrite Films on a Rectangular Dielectric Waveguide Surface	100	56
L.N. Vershinina and M.P. Parkhomenko: Radiation Losses in Dielectric Strip Waveguide Junctions	102	58
V.G. Spitsyn and N.A. Stolyarova: Calculation of the Spectral Characteristics of an Electromagnetic Wave Transmitted Through an Inhomogeneous Array of Scatterers	106	60
D.V. Blagoveshchenskiy and G.A. Zherebtsov: Prediction of Disturbances in RF Radio Channels at High Latitudes	108	63
G.I. Veselov and S.B. Rayevskiy: Complex Waves in Transversely-Inhomogeneous Guiding Structures	111	64
V.N. Mitrokhin: The Power Characteristics of the Natural Waves of a Conical Waveguide	114	67
Yu. A. Korchagin: VLF Field Sources Using Electrically Contrasted Media	117	70
ELECTROOPTICS		
V.A. Shul'gin and V.N. Gun'kin: Conversion Error in an Electrooptical Analog-to-Digital Converter	119	71
COMPUTER APPLICATIONS IN ELECTRONIC CIRCUITS		
V.A. Pogribnoy and O.R. Pristayko: A Correlator with Mixed Signal Representation Using Microprocessor Sections	123	74
V.V. Bravov, V.N. Perminov and A.G. Sokolov: Analysis of Self-Excited Oscillator Circuit Steady-State Modes	127	78
A.K. Senatorov: Investigation of the Effectiveness of Digital Direction Finding Algorithms for Nonperiodic Oscillation Sources	130	81
V.G. Ivanova and A.I. Tyazhev: The Realization of Digital Amplitude Detection Algorithms	132	82
FOR THE ENGINEER		
I.V. Malyshev: Approximation of the Static Output Characteristics of Active Three-Electrode Nonlinear Devices	134	84

	Page English	Page Russian
V.V. Drozhzhev and O.N. Osintsev: A Broadband Piezoceramic Volume Traveling-Wave Resonance Filter	136	85
V.F. Odinokov and A.A. Yefremochkin: A Controlled Oscillator with Automatic Frequency Correction	138	86
V.I. Misevra, I. Kh. Albegova, O.A. Aleksandrova and I.V. Krivonosenko: Improving the Electromagnetic Compatibility of Harmonic Generators	141	89
Ye.N. Mokhov: Correction	142	90
A.Ye. Moshinskiy and A.O. Radomskiy: The Measurement of Noise Factor. A Critique of State Standard GOST 18604.20-78	143	91
On the Occasion of the 75th Birthday of Ya. N. Fel'd	145	94

NUMBER 10

PART 1
TELECOMMUNICATIONS
Volume 41

PROPAGATION OF ELECTROMAGNETIC WAVES

O.P. Frolov and V.G. Yampol'skiy: Estimation of the Average Signal Level in the Case of Long-Range Tropospheric Propagation	1	40
V.N. Chibisov: Compensation of the Effect of Signal Fading by Means of Repeated Transmission	7	44

SIGNAL CONVERSION

G.L. Sedletskiy: A Universal Algorithm for Correcting Phase Errors in Digital Two-Level Frequency Synthesizers	11	47
B.S. Troitskiy: Analysis and Design of Nonlinear Circuits by the Method of Power Series Inversion	15	50
Yu. V. Voronkov, V.M. Kamyshnikov and L.N. Koren'kov: A Compensation Method of Measuring and Reducing the Parasitic Frequency Modulation of AM Oscillations in Generators	20	53

POWER SUPPLIES

B.S. Sergeyev: An Analysis of Single-Cycle Converters in the Case of Considerable Voltage Variations in the Primary Supply System	23	55

PART 2
RADIO ENGINEEERING
Volume 42

CIRCUITS AND DEVICES

B.G. Barabashov, G.G. Vertogradov and A.A. Khondu: Assessment of Vertical Sounding Utilization Efficiency in Decameter-Wave Angle-and-Range Measuring Systems	27	3
A.N. Dyadyunov and V.B. Khartskhayev: The Use of a priori Information in Building the Operating Algorithms of Frame Synchronization Systems	32	7
A.V. Rabtsun: Maximum Likelihood Estimate of Signal Source Coordinates in Multiposition Direction Finding	34	9
V.B. Kozyrev: A Simplified Equivalent Circuit of High-Power MOS Field-Effect Transistors	36	11
L. Sh. Al'ter: The Effect of a Set of Interfering Signals on a Radio Receiver	39	13
F.F. Kolpakov: The Multifrequency Approach to the Problem of the Invariance of Piezoresonant Devices	42	16
N.F. Kovtonyuk and A.V. Osipovich: GLobal-Maximum-Locating Peak Detectors of Improved Accuracy and Speed	46	19

	Page English	Page Russian
V.I. Mordachev: Optimization of Harmonic Filters for Intermodulation Monitoring	49	21
A.V. Khramov and V.A. Shchelokov: The Design of Microwave Transistor Multipliers	51	23
B.V. Degterev and M.M. Panchenko: A Criterion for Determining the Order of a Polynomial Approximating an Amplitude Response	54	26
V.N. Kuleshov and G.V. Kuznetsova: Engineering Estimates of Fluctuations in a Self-Excited Oscillator with a Delay-Free Limiter in a Feedback Loop and Their Application to Investigating MOSFET Self-Excited Oscillators	56	27
SIGNAL TRANSMISSION, RECEPTION AND PROCESSING		
O.V. Gofayzen and A.V. Mindel': Methods of Describing n-Dimensional Message Scanning Processes	58	29
V.V. Avdeyev, V.I. Kozlov and T.V. Mironova: Resolution of Composite Signals by Matched Filtering with Response Normalization	61	32
A.V. Khevrolin: Signal Processing by the Voyutskiy Method and by Means of a Correlator	64	34
A.N. Loginov: A Correlation Classification of Coherent Signals	65	35
V.B. Borisoglebskiy: Modification of the Linear Transform Method for Synthesizing Active Ladder-Type Filters	68	38
G.V. Merkishin: Phase and Phase-Interferential Methods of Measuring Radiation Attenuation over Remote Parts of an Optical Medium	73	42
V.V. Kabanov: An Estimate of the Statistical Characteristics of Signals Against a Background of Atmospheric Radio Interference	76	44
A.A. Bessarabova, I.V. Davydov and V.M. Stopkin: The Correlation and Spectral Properties of Pseudorandom Sequences in the Case of Decimation	79	46
ANTENNAS, WAVEGUIDES AND WAVE PROPAGATION		
A.A. Pistol'kors: Useful Signal Protection by the Frost Technique when there are Errors in an Adaptive Antenna Array	81	47
G.A. Mirskikh and S.V. Vinogradov: The Effect of Mismatched External Loading on the Characteristics of Microwave Filters	86	52
O.N. Tereshin and V.D. Dvurechenskiy: More-Accurate Impedance Boundary Conditions on a Semitransparent Periodically Loaded Structure	89	55
V.G. Yampol'skiy: Matching Conical Horn Radiators	92	57
A.V. Gureyev: ELectromagnetic Energy Losses in Hollow Wavegudies	95	59
V.Ye. Kunitsyn, V.A. Smorodinov and A.B. Usachev: The Amplitude-Frequency and Phase-Frequency Characteristics of Radio Waves Reflected from the Ionosphere	97	61
A.P. Grinchuk and A.V. Gromyko: An Express-Method of Analyzing the Characteristics of Radiating Systems with Axial Symmetry	100	64
V.A. Kolomeytsev and V.V. Yakovlev: Electromagnetic Field Calculation for the Microwave Chamber of a Heating Plant Based on a π-Waveguide	102	65
OPTICAL TECHNIQUES		
V.L. Baikin, L.N. Preslenev and V.O. Solov'yev: Acoustooptical Time Compression of Binary Pulse Trains	104	67
COMPUTER APPLICATIONS IN ELECTRONIC SYSTEMS		
V.B. Pestryakov and V.V. Yarmola: A Microprocessor Pulse Electronic Altimeter	108	70
V.M. Bogachev and A. Yu. Olovyanishnikov: The Synthesis of Polynomial Matching Circuits Based on Fano Integral Relations	110	72
APPLICATION PROBLEMS		
G.S. Veksler,A.A. Kovalenko and V.N. Malyuta: Design of a Secondary Power Supply for an Audio-Frequency Power Amplifier	114	75

	Page English	Russian
B.A. Glebov, E. Konekhero and A.A. Lukin: A Push-Pull Tuned Transistorized DC Converter	117	77
A.I. Tyazhev: The Design of Twin-Cirucit Digital Bandpass Filters	120	80
V.Z. Pruslin, V.P. Predtechin and S.G. Fen': The Dependence of Receiver Power Characteristics on the Detuning	124	83
M.V. Kapitonov, N.N. Prokopenko, Yu. M. Sokolov and N.I. Yasyukevich: Nonlinear Correction Networks for Voltage Stabilizers	125	84
Yu. V. Alekseyev, B. Ye. Zhelezovskiy, T.A. Kapitonova and M. Ye. Shneyder: Quasi-Post-Type Waveguide Bandpass Filters	130	88
V. Ya. Groshev: Methods of Increasing the Relative Speed of Operational Amplifiers	132	90

NUMBER 11

PART 1
TELECOMMUNICATIONS
Volume 41

ANTENNA-FEEDER DEVICES

A.M. Model', V.A. Stuzhin, and V.S. Manayenkov: Temperature-Stable Waveguide Bandpass Filters	1	28
G.N. Shelamov: Dielectric Microwave Resonators in Waveguide E-Plane Structures	6	31

CONTROL AND MEASUREMENTS

K.N. Martyshevskiy and V.P. Mushkov: Automatic Control of the VSWR of an Antenna-Waveguide Channel in Low-Noise Receivers without Interrupting Communications	11	35
Ye.A. Anfilov, G.A. Kliger, and V.I. Komissarov: A Coaxial Power Divider	15	38
S.A. Kachashkin: A Mathematical Model of the Preventive Maintenance of Multichannel Transmission Systems	17	45
Ye.K. Levin and A.S. Nemirovskiy: A Method of Suppressing the Combined Noise from a Radiation Source and Passive Reradiators	22	48

NETWORK THEORY AND FILTERS

A.T. Mingazin: Synthesis of Recursive Digital Filters with Limited Coefficient Wordlength	26	58

PART 2
RADIO ENGINEERING
VOLUME 42

ELECTRONICS SYSTEMS AND DEVICES

V.N. Zhurakovskiy, D.L. Kazakov, and O.K. Shanayev: A Method of Analyzing Digital Detection Systems Using Dependent Samples of an Input Process	33	3
L.A. Shkol'nyy: An Estimate of the Resolving Power of a Synthesized-Aperture Radar	36	5
B.G. Teryayev: The Noise Immunity of FM-4 Quasi-Coherent Signal Demodulators	39	8
Ye.L. Pustovoytov: The Use of HF Signal Predistortion in Radio Communications Systems	44	13
D.V. Igumnov and S.V. Kostyunin: Transformerless MOSFET-Type Voltage Converters	47	15
V.B. Antipov: A Refined Method of Finding the Derivative in the Frequency Domain in Calculating the Steady-State Conditions of a Nonlinear Circuit	49	17
I.F. Gavrilenko: An Adaptive Pulse Selector	52	19
S.G. Fen': The Noise Immunity of an AGC System with Controllable Passband	55	22
L.I. Volgin, A.V. Yefimov and A.I. Zarukin: Analog Logic Elements	57	23

	Page English	Page Russian
A.A. Aleksanyan, V.A. Galakhov, V.L. Mozheyko, V.G. Moiseyev, and K.K. Nikitin: A 50 W Switched MW Radio Broadcasting Transmitter	60	26
Ye.V. Suvorov and A.I. Khaustov: A Simple Code Converter for Transmission over Optical Links	61	27
Yu.A. Zubets: A High-Speed Amplifier for Reading Out the Signals of Charge-Coupled Integrated Circuits	63	28
G.V. Kuznetsova and V.N. Kuleshov: Quasistatic Analysis of Fluctuations in Self-Excited Oscillators Based on Schottky-Barrier Field-Effect Transistors	64	29
SIGNAL TRANSMISSION RECEPTION AND PROCESSING		
G.A. Borodin: Redundancy of Unidirectional Error-Correcting and (or) Detecting Codes	67	31
G.I. Tuzov, V.I. Postavnoy, and N.V. Tupitsyn: Investigation of the Cross Correlation Function of Frequency-Phase-Shift Keyed Signals	70	35
G.G. Bryzgalova and A.G. Trusov: Effectiveness of the Sequential Analysis Technique in Radar Signal Detectors	73	37
A.M. Lazarev: Analysis of the Convergence of Adaptation Algorithms when There is a Delay in Estimating the Gradient	76	40
I.A. Golyanitskiy: Signal Detection on a Background of Non-Gaussian Noise by Means of Multiposition Systems	78	42
Ye.S. Golovin and S.Yu. Dremin: Effectiveness of Broadband Matched Filtering of Multiplicative Interference in Mobile Radio Communications Systems	83	45
ANTENNAS, WAVEGUIDES AND WAVE PROPROGATION		
V.A. Alimov: Radio Wave Attenuation by Stratified Tropospheric Irregularities in Mountainous Regions	87	49
V.B. Fortes: Interferometer Radiation Pattern Distortions on Tropospheric Over-the-Horizon Routes	91	53
N.V. Kalashnikov and A.V. Runov: Electrodynamic Modeling of Wire Antennas on Conducting Bodies	94	56
B.N. Bondarenko, V.G. Kryzhanovskiy, I.B. Makarenko, and M.F. Stepko: A Directional Coupler with Series-Connected Coupled Transmission Lines	98	59
Yu.A. Lazunin and O.S. Orlov: A Resonant Microwave Semiconductor Diode Power Limiter	100	61
V.V. Kopeykin: Features of the Propagation of Nonuniform Waves in a Dispersive Medium	102	62
O.A. Alekseyev: Ensuring Reliable Communications in a Group of Frequency-Adaptive Decameter-Band Radio Links	105	65
OPTICAL COMMUNICATIONS		
N.A. Semenov: Mode Frequency Characteristics of Multimode Optical Fibers	108	67
Ye.N. Voronin: Contrast-Material Technique in Radio and Acoustic Holography	111	70
COMPUTER APPLICATIONS		
V.F. Krivoruchko: The Synthesis of Microprogrammed Controllers with a Reconfigurable Address Register	116	74
Ye.A. Smirnov and S.V. Kuchma: An Estimate of the Error Probability in the Discrimination of Two Signals with a Reduced Number of Tests during Computer Modelling	119	77
T.I. Boldyreva, A.F. Ob"edkov, and A.A. Turkin: The Computer-Aided Design of Microwave Transistor Power Amplifiers	121	78
A.V. Khevrolin and V.N. Osher: Experience with the Computer Implementation of an Algorithm for Calculating Multimode Waveguide Characteristics	123	80

	Page English	Page Russian
FOR THE ENGINEER		
Yu.S. Cherkashin: Functional Analysis of the Charge Circuit of a Voltage-Stabilized Pulse Modulator	125	81
N.I. Yepifanov, V.A. Novikov, and Ye.A. Chemes: Experimental Investigation of RF Mixers	128	84
E. Ye. Artemchenko, A.D. Vinogradov, and V.V. Volynets: A Phase Shifter Based on RC-Circuits	131	86
A.I. Zarukin: A High-Output Voltage Stabilizer	134	88
V.I. Korochentsev and L.G. Statsenko: Calculation of the Radiation Impedance of a Spheroid-Mounted Loop	135	89

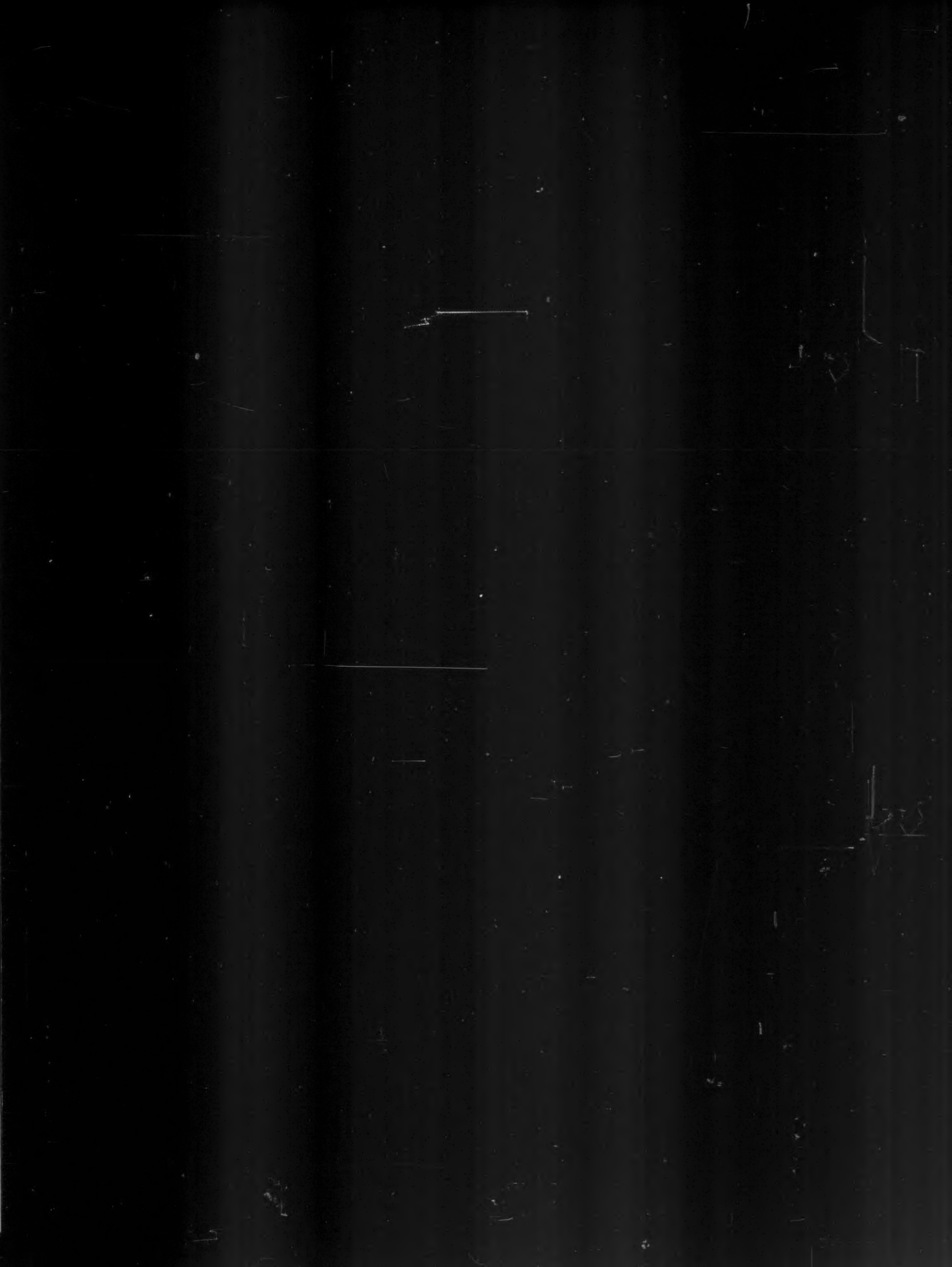
NUMBER 12

PART 1
TELECOMMUNICATIONS
Volume 41

DIGITAL CIRCUITS		
V.A. Biryukov and V.P. Korneyev: Features of the Application of Time Group-Forming Devices in a Synchronous Digital Network	1	3
A.A. Kayatskas and P.A. Eymantas: Algorithmic Increase in the Frequency Stability of Digital Communications Networks	6	6
B.N. Maglitskiy and O.N. Porokhov: Criteria for Selecting Alphabet Code Tables	9	8
V.A. Pertseva and I.V. Sitnyakovskiy: Optimization of the Structures and Parameters of a Subscriber Speech Codec	13	11
F.B. Fedortsov: The Correction of Phase Distortions in the Linear Channels of Digital Transmission Systems	19	15
A.V. Brunchenko, Ye.P. Okhinchenko and A.Ye. Sedov: Digital Detectors of Harmonic Components for Signals with Adaptive Delta-Modulation	24	18
COMMUNICATION LINES		
N.A. Semenov: Methods of Calculating the Transfer Characteristics of Multimode Lightguides with Nonoptimal Profiles of the Refractive Index	29	40
TRUNK RADIO COMMUNICATIONS		
V.Ye. Guzeyev: An Experimental Investigation of SW Radiolink Quality Pickups	34	48
SIGNAL GENERATION AND CONVERSION		
V.N. Kuleshov and A.V. Popov: Investigation of the Noise in "Selection-Storage" Type Pulse-Phase Detectors	39	52
V.P. Budishov: Algorithms for the Digital Synthesis of an Equidistant Network of Carrier and Control Frequencies	43	55
Yu.A. Bryukhanov: Reduction in the Duration of Transients in a PAFC System with an Idealized Filter	46	57

PART 2
RADIO ENGINEERING
Volume 42

ELECTRONIC CIRCUITS AND DEVICES		
Yu.V. Seregin: A Lower Limit for the Number of Functional Relations Required to Compare Design Versions of Communication Systems with Free Access of Subscribers	49	7

	Page English	Page Russian
A.S. Andreyev, Yu.V. Gulyayev, A.M. Kmita, I.A. Markov, V.G. Shishkin and Yu.M. Shchukin: Surface Acoustic Wave Filters Using Interdigital Transducers with Submicron Interelectrode Gaps.....	52	10
Yu.A. Agal'tsova, B.Ye. Petrov and L.S. Sibirtsev: Microstrip Oscillators using Multistructure IMPATT Diodes.....	56	14
E.K. Algazinov and A.D. Korobova: Effect of External Feedback on the Characteristics of an Amplifier in the Presence of Interference....	62	20
A.V. Baranov, Yu.A. Bulin and M.A. Kartsev: A Method of Improving the Thermal Stability of Medium-Power Microwave Amplifiers.....	65	23
A.V. Mezheritskiy: The Q-Factor of a Piezoceramic Resonator.....	68	25
P.N. Tissen: A Logarithmic Amplifier with Additive Compensation	71	28
R.M. Matshin, R.D. Mukhamedyarov, M.A. Prokhorov and R.I. Kharisov: Digital Simulation of a One-Dimensional Nonrecursive Filter.....	73	29
Yu.G. Lega: Determination of the Signal-to-Interference Ratio in a Receiver with an AM-Tracking Filter.....	74	30
I.V. Abramzon: A Mathematical Model of the Effect of Mechanical Stress on the Frequency of Two-Way *Y*-Cut Crystal Resonators.....	76	32
S.M. Nikulin: Measurement of the Scattering Parameters of Two-Ports by a Variable-Load Technique.....	77	33
SIGNAL TRANSMISSION, RECEPTION AND PROCESSING		
V.K. Marigodov: The Design of Optimum Predistortion and Compensating Filters.....	79	34
A.P. Lisitskiy and V.V. Nikiforov: Modeling of Minor Distortions in an Amplifiers with Correcting Amplitude and Phase Feedback.....	81	36
Yu.V. Sopel'nik: Linear Detection of Independently-Fluctuating Signals.	83	38
S.M. Tuzhilin: A General Formula for the Spectral Density of Signals Having the Form of a Hermitian Function.....	86	40
L.G. Dorosinskiy: The Choice of a Method for the Joint Measurement of the Angular Coordinates of Several Radiation Sources.....	89	43
V.A. Danilov: Effectiveness of Amplitude Suppression of Sinusoidal Interference with Radio-Frequency and Video-Frequency Spectra.....	92	45
V.I. Dolgov and A.V. Brezgunov: Analysis of the Power Characteristics in the Joint Utilization of *q*-nary and Multibase Coding.....	96	49
M.A. Ivanov: Distribution of the Output Response of Volterra-Type Narrowband Nonlinear Systems.....	99	52
ANTENNA-WAVEGUIDE TECHNIQUES AND RADIO-WAVE PROPAGATION		
V.V. Nikol'skiy and A.Yu. Kozlov: Electrodynamic Analysis of the Losses in Microstrip Line Conductors Taking Their Multilayer Structure into Account.....	103	54
V.D. Gusev, I.Yu. Zhidovlenko and L.I. Prikhod'ko: Effect of Scattering on the Dispersion Distortions of Signals and Confined-Beam Diffraction with Partial Ionospheric Reflection.....	109	60
L.I. Yershov, S.D. Kremenetskiy and V.F. Los': Parameters of Slotted-Waveguide Arrays Operating at Harmonics of the Fundamental Frequency	112	63
A.N. Yegorov and V.Ye. Ryabtsev: An Electrodynamic Calculation of the Input Impedance of a Thin Unbalanced Dipole.....	116	66
V.A. Kravtsov, L.B. Pasyutina and O.L. Ulasik: The Transfer Admittances of Transverse Slots in a Cylindrical Attachment to a Metal Wedge....	118	68
R.I. Andreyeva, A.G. Glushchenko, Ye.P. Kurushin and T.A. Chasovnikova: A Compact Ferrite Isolator for the 2-mm Band.....	121	71
S.D. Mirovitskaya and M.V. Filippo: Investigation for Probing Beam Refraction in Dielectric Cylinders of Various Types.....	123	72
V.M. Katushkina, V.P. Malyshev and A.B. Nikitin: A Microwave Oscillator with Output Signal Amplitude and Phase Control.....	127	76
Yu.V. Alekseyev, B.Ye. Khelezovskiy and M.Ye. Shneyder: Waveguide Compensation Device Based on Transmission Line Sections.....	129	78

	Page English	Russian
OPTICAL TECHNIQUES AND SYSTEMS		
V.I. Shcherbak: Accuracy Characteristics of Estimates of the Parameters of Optical Signals in Interference-Type Measurement Systems.....	131	79
A.F. Dubinin and A.N. Panasyuk: The Error Probability in a Digital Fiber-Optic Communication Channel.....	135	83
COMPUTER APPLICATIONS IN ELECTRONICS		
I.P. Norenkov, Yu.A. Yevstifeyev and V.B. Manichev: A Steady-State Analysis Method for Multiperiod Electronic Circuits.....	138	86
FOR THE ENGINEER		
M.I. Kharitonov and Ye.K. Tarygin: The Detection of an NRZ Code in Magnetic Recording Devices.....	142	90
G.M. Krylov: A Selective Amplifier with a Regulated Load.....	145	92
V.B. Kazakov: An Analysis of Matrix Flat Television Screen Control Algorithms.....	147	94